## Vogtle Unit 4 Findings

### Design Engineering

**Identified By:** NRC
**Identification Date:** 12/31/2017
**Significance:** Green
**Item Type:** ITAAC Finding

The NRC identified an ITAAC finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50.55a(b), for the licensee's failure to demonstrate compliance with American Society of Mechanical Engineers (ASME) Code Section III, 1998 Edition with Addenda 1999 through 2000, Section NB-3222.2, "Primary Plus Secondary Stress Intensity." The inspectors identified that the licensee failed to ensure that the maximum range of stress intensities for the passive residual removal heat exchanger (PRHR HX) tube sheet and the core makeup tank (CMT) inlet nozzle were within ASME Code allowable limits for Service Level A/B conditions which was a performance deficiency. The licensee entered this finding into their corrective action program (CAP) as Condition Report (CR) 10402072, CR 10402069, CR 10454090, Corrective Action Prevention and Learnings (CAPAL) 100489810, and CAPAL 100489811 and took corrective actions to perform additional analyses after removing calculation conservatism to reevaluate the stress cut locations in question in order to show ASME Code compliance.

The finding was determined to be more than minor because the performance deficiency represented an adverse condition that rendered the quality of components indeterminate, and required substantive corrective action. The inspectors determined this finding was associated with the Design/Engineering Cornerstone. Using IMC 2519, Appendix A, "AP1000 Construction Significance Determination Process," the inspectors determined that the finding was associated with a system or structure; it was associated with the Passive Core Cooling System (PXS) system which is assigned to the high risk importance column of the AP1000 Construction Significance Determination Matrix, and the licensee was able to demonstrate with reasonable assurance that the design function of the applicable structure or system would not be impaired by the deficiency. Therefore, this finding was of very low safety significance (Green). The inspectors determined the finding was indicative of present licensee performance and was associated with the cross-cutting aspect of Conservative Bias, H.14, in the area of Human Performance, in accordance with IMC 0613, Appendix F, "Construction Cross-Cutting Areas and Aspects." (1A11, 1A38)

**Identified By:** NRC
**Identification Date:** 06/30/2017
**Significance:** Green
**Item Type:** ITAAC Finding

The NRC identified an ITAAC finding of very low safety significance (Green) and associated NCV of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion III, "Design Control" for the licensee's failure through their contractor Westinghouse Electric Company (WEC) to perform thermal stress analysis in the ASME design report for the shear cap and valve body of the 14-inch fourth-stage automatic depressurization system (ADS) squib valves, RCS-PL-V004A/B/C/D. The licensee entered this finding into their corrective action program as Condition Reports (CR) 10379762 and 10389193 and WEC Corrective Action, Prevention and Learning (CAPAL) 100478099 and 100481984. The licensee performed immediate corrective actions to demonstrate with reasonable assurance through design analysis that the component would have been able to meet its design function. Additional long-term corrective actions include performance of additional analysis and revisions to the ASME design report and supporting documentation.

The inspectors determined this finding was associated with the Design/Engineering Cornerstone. The finding was determined to be more than minor because the performance deficiency represented an adverse condition that rendered the quality of component indeterminate, and required substantive corrective action. The inspectors also determined that the finding was more than minor because it

represented an ITAAC finding that was material to the acceptance criteria of VEGP Unit 3 and 4 ITAAC 13 (2.1.02.02a), and if left uncorrected, the licensee may not have been able to demonstrate that the acceptance criteria of this ITAAC was met. The inspectors evaluated the finding in accordance with IMC 2519, Appendix A, "AP1000 Construction Significance Determination Process," and determined the finding was of very low safety significance (Green) because it was associated with the RCS system which is assigned to the high risk importance column of the AP1000 Construction Significance Determination Matrix, and the licensee was able to demonstrate with reasonable assurance that the design function of the applicable structure or system would not be impaired by the deficiency. The inspectors determined the finding was indicative of present licensee performance and was associated with the cross-cutting aspect of Documentation, in the area of Human Performance, in accordance with IMC 0613, Appendix F, "Construction Cross-Cutting Areas and Aspects." Specifically, the licensee failed to maintain complete, accurate, and up-to-date design documentation for the 14-inch ADS squib valves [H.7]. (Section 1A01)

**Identified By:** NRC
**Identification Date:** 03/31/2016
**Significance:** Green
**Item Type:** ITAAC Finding

**Failure to Perform AISC N690-94 Required Weld Nondestructive Examination**

Green. The inspectors identified an ITAAC finding of very low safety significance (Green) and associated non-cited violation (NCV) of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion XV, "Nonconforming Materials, Parts, or Components" for Southern Nuclear Company's (SNC) failure through their contractor Westinghouse Electric Company (WEC) to adequately review and accept nonconforming items in accordance with documented procedures. The licensee entered this finding into their corrective action program as condition reports (CR) 10180672 and 10181738.

The finding was associated with the Design / Engineering Cornerstone. The finding was considered more than minor because the performance deficiency represented a substantive failure to adequately implement a quality assurance process that rendered the quality of a structure, system, or component (SSC) indeterminate. The inspectors evaluated the finding in accordance with IMC 2519, "Construction Significance Determination Process," and determined the finding was of very low safety significance because the finding is associated with a portion of a structure (auxiliary building) assigned to the intermediate risk column of the AP1000 construction significance determination matrix and would not reasonably be expected to impact the design function of the auxiliary building. The inspectors determined that the finding represented an ITAAC finding because it was material to the acceptance criteria of VEGP Units 3 and 4 ITAAC 763, in that, if left uncorrected, the licensee may not be able to demonstrate that the acceptance criteria of these ITAAC were met. The acceptance criteria of these ITAAC require that all deviations between the as-built structures and the approved designs be reconciled to verify that the as-built structures will withstand the design basis loads without a loss of structural integrity or other safety-related functions.

The inspectors determined that the failure to adequately review and accept nonconforming items in accordance with documented procedures may have resulted in a deviation from the approved design that would not have been reconciled by the licensee. The inspectors reviewed the finding for a possible cross-cutting aspect in accordance with IMC 0613 Appendix F, "Construction Cross-Cutting Areas and Aspects," and determined the finding has a cross-cutting aspect in the Human Performance area because the licensee's contractor, WEC, failed to use decision making-practices that emphasized prudent choices over those that were simply allowable. [H.14].

**Identified By:** NRC
**Identification Date:** 06/30/2015
**Significance:** Green
**Item Type:** ITAAC Finding

**Weld Allowable Stress Calculation Not in Compliance with Current Licensing Basis**

Green. The inspectors identified an ITAAC finding of very low safety significance (Green) and associated non-cited violation (NCV) of Title 10 Code of Federal Regulations (CFR) Part 50, Appendix B, Criterion III, “Design Control.” Southern Nuclear Operating Company (SNC), failed through their contractor Westinghouse Electric Corporation (WEC), to correctly translate design basis into specifications, drawings, procedures, and instructions to correctly translate the design basis for welded structural connections into specifications, drawings, procedures, and instructions. The licensee entered this finding in their corrective action program as condition report (CR) 10060139, Corrective Action, Prevention and Learnings (CAPAL) 100224197, and corrective action report (CAR) 2015-1597.

The inspectors determined the performance deficiency was more than minor because it represented a substantive non-conservative error in a design document that defines the technical requirements for structural welds that are important to safety. The inspectors evaluated the finding using the construction significance determination process and determined the finding was of very low safety significance (Green) because the licensee was able to demonstrate with reasonable assurance that the design function of the affected components would not be impaired by the deficiency. The finding was determined to be an ITAAC finding because it was material to the acceptance criteria of Units 3 and 4 ITAACs 760, 761, 762, and 763. The acceptance criteria of these ITAAC require that reconciliation reports, concluding the "as-built" construction conforms to the approved design, are completed for the areas associated with each ITAAC. This finding is associated with deviations from design requirements that would not have been reconciled by the licensee as required by the ITAAC. The finding had a cross-cutting aspect in the area Human Performance (Conservative Bias) because the licensee’s contractor, WEC, failed to use decision making-practices that emphasized prudent choices over those that were simply allowable [H.14].

**Identified By:** NRC
**Identification Date:** 05/25/2012
**Significance:** Green
**Item Type:** ITAAC Finding

**Inadequate Design Control of Software Development**

An NRC identified ITAAC finding of very low safety significance (Green) which involved a violation (VIO) of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” was identified by the inspectors on May 25, 2012, regarding the licensee’s failure to assure that applicable regulatory requirements and the design basis, as defined in § 50.2 and specified in the license application, for the Protection and Safety Monitoring System (PMS) were correctly translated into specifications, drawings, procedures, and instructions. Specifically:

- The verification and validation (V&V) effort did not adequately perform the minimum V&V tasks including software requirements evaluation, interface analysis, criticality analysis, hazard analysis, and risk analysis;

- The V&V of the System Definition (requirements) phase activities was not performed independently; Reusable software element documents (RSED) did not follow the prescribed life cycle activities;

- A software hazard analysis of the software requirements specification (SRS) was not performed;

- The SRS was ambiguous, incomplete and was not ranked for importance.

At the time of the exit meeting for this report, the planned corrective actions for these issues were being evaluated by the licensee. These issues were entered into a corrective action program as Condition Report 438475.

The inspectors determined this issue is more than minor because, if left uncorrected, it represents a failure to implement an adequate process and quality oversight function that could render the quality of the construction activity unacceptable or indeterminate, and it could adversely affect the closing of an ITAAC. The finding affected the objective of the Design/Engineering Cornerstone, which is to ensure that licensee's processes are adequately developed and implemented for design control. The finding was determined to be an ITAAC Finding because examples of this finding are material to the acceptance criteria of ITAAC 2.5.2.12, in that; software requirements were not ranked for importance and the V&V team was not independent of the design team. The inspectors evaluated the finding using the construction SDP and determined that, because there were no issues identified that would reasonably be expected to impair the design function of the PMS, the finding screened as Green. The finding was cross- cutting in the area of baseline inspection, work practices, because the licensee failed to ensure supervisory and management oversight of work activities associated with the PMS software development such that the construction quality was supported. [A.4(c)].

## Procurement/Fabrication

**Identified By: NRC**
**Identification Date:** 03/31/2019
**Significance: Green**
**Item Type:** ITAAC Finding
**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Integrated Inspection Reports 05200025/2019001, 05200026/2019001
**Item Number:** 05200026/2019001-01
**Note:** Closed in Report (NCV)

**Failure to Identify Nonconforming Radiographic Film**

The NRC identified an ITAAC finding of very low safety significance (Green) and associated NCV of Title 10 of the Code of Federal Regulations, Part 50, Appendix B, Criterion XVI, Corrective Action, for the licensee's failure to identify nonconforming radiograph films for the Unit 4 core makeup tank (CMT) B. The licensee failed to identify that density variations for radiograph film sections 8-9 and 14-15 for the CMT B manway to shell weld (CW-035) were nonconforming to ASME Code, Section III, 1998 Edition including 2000 Addenda, Sub-article NB-5100, General Requirements for Examination. The licensee entered this finding into their corrective action program as condition reports (CRs) 50010045 and 50010650 and subsequently performed additional radiographs in order to provide reasonable assurance of ASME Code compliance.

The finding was determined to be more than minor because the performance deficiency represented an adverse condition that rendered the quality of a component indeterminate, and required substantive corrective action. The inspectors determined this finding was associated with the Procurement/Fabrication Cornerstone and was not associated with a security program; it was not associated with an IMC 2504 operational/construction program; and it was not associated with a repetitive, NRC-identified omission of a program critical attribute. Using IMC 2519, Appendix A, AP1000 Construction Significance Determination Process, the inspectors determined that the finding was associated with a system; i.e. the passive core cooling system (PXS), which is assigned to the intermediate risk importance column of the AP1000 Construction Significance Determination Matrix. The licensee was able to provide reasonable assurance that the design function of the applicable system was not adversely affected. Therefore, this finding was of very low safety significance (Green). The inspectors determined the finding was indicative of present licensee performance and was associated with the cross-cutting aspect of Conservative Bias, H.14, in the area of Human Performance. Specifically, the licensee failed to use decision making practices that emphasized prudent choices over those that are simply allowable when condition reports were dispositioned without expanding the scope of review based on known nonconformances and potential issues identified in previous NRC violations, construction experience, and licensee extent of condition reviews. (1A38)

## Construction/Installation

**Identified By:** NRC
**Identification Date:** 11/29/2021
**Significance:** Green
**Item Type:** Construction Finding
**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Initial Test Program and Operational

Programs Integrated Inspection Reports 05200025/2021008, 05200026/2021008
**Item Number:** 05200026/2021008-02
**Note:** Open in Report (NCV)

**Failure to Follow Procedure CNSITPP-502**

NRC inspectors identified a construction finding of very low safety significance and an associated NCV of 10 CFR, Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” for the licensee’s failure to accomplish activities associated with local leak rate testing of electrical penetration 4-IDSC-EY-P29Y in accordance with procedure 4-CNS-ITPP-502, “Containment Penetration Leak Rate (Type B) Preoperational Test,” Version 1.0. Specifically, the licensee failed to wait for flowmeter readings to stabilize prior to recording the leak rate data and inappropriately declaring the test acceptance criteria met. The licensee entered this issue into its CAP as CR 50116481.

The performance deficiency was determined to be of more than minor safety significance and thus a finding because it rendered the quality of a structure, system, or component (SSC) unacceptable or indeterminate and required substantial corrective action. The inspectors determined the finding was associated with the containment and was of very low safety significance (Green) because the issue did not affect a design function. The inspectors determined the finding had a cross-cutting aspect of training, in the area of Human Performance. Specifically, the organization failed to ensure that test personnel were trained to perform tests in a consistent manner.

**Identified By:** NRC
**Identification Date:** 12/31/2019
**Significance:** Green
**Item Type:** ITAAC Finding
**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Integrated Inspection Reports 05200025/2019004, 05200026/2019004
**Item Number:** 05200026/2019004-01
**Note:** Closed in Report (NCV)

**Failure to Meet ITAAC Requirement for Installation**

The inspectors identified an ITAAC finding of very low safety significance (Green) with an associated NCV of 10 Code of Federal Regulations (CFR) Part 50, Appendix B, Criterion IV, “Procurement Document Control,” for the licensee’s failure to specify an accurate conversion factor for calculating the dry film density of coatings used in containment. Specifically, the licensee used a conversion factor that was rounded in a non-conservative manner, which resulted in the dry film density not meeting the ITAAC. The licensee entered this issue into its corrective action program as CR 50034350 and CR 50034649. The licensee performed immediate corrective actions to demonstrate with reasonable assurance the non-conforming coatings with a dry film density of 99.83 pounds per cubic feet (lbs/ft3) would not transport to the containment sump screens and the design function of the PXS would not be impaired.

The performance deficiency was of more than minor safety significance, and thus a finding, because it was material to the acceptance criteria of an ITAAC. The inspectors determined this finding was not associated with a security program; it was not associated with an IMC 2504 operational or construction program; and it was not associated with a repetitive, NRC-identified omission of a program critical attribute. The inspectors determined this finding was of very low safety significance (Green) because the licensee was able to demonstrate with reasonable assurance that the design function of the applicable structure or system would not be impaired by the deficiency. The inspectors determined the finding was indicative of present licensee performance and was associated with the cross-cutting aspect of Conservative Bias, in the area of Human Performance. Specifically, the licensee failed to use decision making practices that emphasized prudent choices over those that are simply allowable when rounding off conversion factors in specifications, and when receiving coatings that were within less than 0.25% of the acceptance criterion. [H.14] (Section 1A06)

**Identified By:** NRC

**Identification Date:** 03/31/2015
**Significance:** Green
**Item Type:** Construction Finding

**Failure to Perform Routine Quality Control Inspections**

The inspectors identified a construction finding of very low safety significance (Green) and associated non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” for the licensee’s failure to accomplish safety-related, required quality control inspections in accordance with CB&I QC inspection plan FS561-004. The licensee entered the issue in their corrective action program as condition report number 10039935.

The finding was associated with the Construction/Installation Cornerstone. The inspectors determined the performance deficiency was more than minor because the issue represented a substantive failure to implement an adequate quality oversight function, in that these routine welding inspections were not performed by the licensee's contractor for over six months. The finding was determined to be a construction finding because it was not associated with a specific ITAAC. The inspectors determined that the finding was of very low safety significance (Green) because the finding could not be directly associated with a system or structure. This finding has a cross-cutting aspect in the area of Human Performance, Procedure Adherence because the licensee failed to ensure that individuals followed specific procedures [H.8].

**Identified By:** NRC
**Identification Date:** 05/07/2012
**Significance:** Green
**Item Type:** Technical Finding

**Failures to Properly Classify Conditions Adverse to Quality**

The inspectors identified a Green technical finding and cited violation (NOV) of 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action, with five examples of the licensee’s failure to adequately identify conditions adverse to quality (CAQ) due to inadequate evaluation and classification attributes. The licensee issued Condition Report (CR) 441941 to address this issue and to review the classification of the five identified examples and other corrective action documents for inappropriate thresholds. This performance deficiency had greater than minor safety significance because it identified issues that, if left uncorrected represented failures to implement an adequate program that could render the quality of the construction activity unacceptable or indeterminate. The finding was a technical finding associated with the construction/installation cornerstone and was evaluated under the construction significance determination process as outlined in IMC 2519P Appendix A. This finding is of very low safety significance (Green) because none of the examples impaired the design function of a system or structure listed in the construction significance determination process risk importance table. This finding was directly related to the construction cross cutting area of baseline inspection and the Corrective Action Program component because the licensee’s suppliers failed to adequately evaluate and classify conditions as adverse to quality due to an inappropriately high threshold for classifying conditions adverse to quality. [A.5(c)].

**Identified By:** NRC
**Identification Date:** 05/07/2012
**Significance:** Green
**Item Type:** Technical Finding

**Failure to Correct a Condition Adverse to Quality**

The inspectors identified a Green technical finding and cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action, for a failure to correct a CAQ. The licensee initiated CR 441949 to document this finding in their corrective action program, and to evaluate the extent of the condition and the areas where corrective action may be needed.

This performance deficiency had greater than minor safety significance because it involved the closure of three corrective action reports that all identified a potential adverse trend (a potential CAQ or significant CAQ) without an evaluation or justification for closure and without any corrective action. The finding was a technical finding associated with the construction/installation cornerstone and was evaluated under the construction significance determination process as outlined in IMC 2519P Appendix A. This finding is of very low safety significance (Green) because the identified condition did not impair the design function of a system or structure listed in the construction significance determination process risk importance table. This finding was directly related to the construction cross cutting area of baseline inspection and the

corrective action program component because the licensee's supplier failed to adequately evaluate and correct conditions adverse to quality. [A.5(c)].

## Inspection/Testing

**Identified By:** NRC
**Identification Date:** 11/04/2020
**Significance:** Green
**Item Type:** ITAAC Finding
**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Integrated Inspection Reports 05200025/2020004, 05200026/2020004
**Item Number:** 05200026/2020002-02
**Note:** Closed in Report (NCV)

**Failure to Construct and Perform Quality Inspections on the Battery Racks for the Class 1E DC and Uninterruptible Power Supply System**

The inspectors identified an ITAAC finding of very low safety significance with an associated NCV of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings." The licensee failed to construct and perform quality inspections on Unit 3 and Unit 4 Class 1E DC and uninterruptible power supply system (IDS) battery racks for the 250 Vdc 24-hour, 72-hour, and spare batteries in accordance with ITAAC 2.6.03.02.i and the approved design requirements for Vogtle Units 3 and 4. The licensee entered this finding into its CAP as CR 50066999, conducted engineering analysis of the nonconforming conditions, and performed rework on the battery racks to correct the nonconforming conditions.

This performance deficiency was of more than minor safety significance, and thus a finding, because it was material to the acceptance criteria of an ITAAC and invalidated the Inspection, Test, or Analyses described in the ITAAC 2.6.03.02.i. This finding was not associated with a security program; it was not associated with an IMC 2504 operational or construction program; and it was not associated with a repetitive, NRC-identified omission of a program critical attribute. This finding was a licensee performance deficiency of very low safety significance because it was associated with the IDS and there was reasonable assurance the design function of the system would not have been impaired by the deficiency based on engineering analysis of the nonconforming conditions identified. The inspectors determined this finding was indicative of present licensee performance and affected the cross-cutting area of human performance and the cross-cutting aspect of avoiding complacency. The proximate cause of the performance deficiency was primarily attributed to a failure to perform a thorough review of the work instructions and to plan the activity every time without relying on past successes and assumed conditions. [H.12] (Section 1A15)

**Identified By:** NRC
**Identification Date:** 03/31/2017
**Significance:** Green
**Item Type:** ITAAC Finding

**Failure to Identify Nonconforming Welds.**

Green: The inspectors identified an ITAAC finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to identify nonconforming welds between seismic category I structural modules associated with the Unit 4 In- Containment Refueling Water Storage Tank steel wall (IRWST) – module CA03. Specifically, the license failed to identify that welds 880718-A12 and 880717- A09 were nonconforming to section 5.11.5 of American Welding Society (AWS) Code D1.6:1999, in that these welds contained multiple locations of weld reinforcement that exceeded 1/8 inch and did not have a gradual transition to the plane of the base metal surface. The licensee entered this finding in their corrective action program as Corrective Action, Prevention and Learning (CAPAL) 100451345, Nonconformance and Disposition Report (N&D) SV4-CA03- GNR-000049, and SV4-CA03-GNR-000050. The licensee reworked the welds and restored compliance with the approved design.

The inspectors determined the performance deficiency was more than minor because Question 3 provided in IMC 0613, Appendix E was answered "Yes." Specifically, the inspectors considered the rework required to restore welds 880718-A12 and 880717-A09 to design requirements, to be substantive, based on the linear feet of nonconforming weld and because the rework invalidated the

surface examinations that had already been performed... Using Appendix A, “AP1000 Construction Significance Determination Process,” of IMC 2519, “Construction Significance Determination Process,” the inspectors concluded this finding was of very low safety significance (Green) because the licensee demonstrated with reasonable assurance that the design function of the IRWST steel wall would not be impaired by the deficiency (Step 9 of Appendix A). This finding was cross-cutting in the area of Problem Identification and Resolution, Identification, because individuals did not identify issues completely, accurately, and in a timely manner in accordance with the corrective action program. [P.1] (Section 1A34)

**Identified By:** NRC
**Identification Date:** 12/31/2016
**Significance:** Green
**Item Type:** ITAAC Finding

The inspectors identified an ITAAC finding of very low safety significance (Green) and associated NCV of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to identify nonconforming welds between seismic category I embed plates and structural modules inside the Vogtle Unit 3 and Unit 4 containment building. The licensee entered this finding into their corrective action program as Condition Reports (CRs) 10308295, 10308213, Corrective Action, Prevention, and Learning (CAPAL) 100436977, SV3-CA01-GNR-000958, SV3-CA02- GNR-000069, and SV4-CA05-GNR-000028.

The inspectors concluded this finding was associated with the Construction Reactor Safety - Inspection/Testing Cornerstone. The finding was considered more-than-minor because the issue was not isolated, similar to example 11 from Appendix E, "Examples of Minor Construction Issues," of IMC 0613, and represented a substantive failure to implement a quality oversight function. Specifically, the inspectors identified at least 33 nonconforming welds that were accepted by at least eight different quality control (QC) inspectors. The inspectors determined the finding was of very low safety significance (Green) because the finding was associated with Row 1 of the AP1000 Construction Significance Determination Matrix and the containment internal structures basemat was associated with the Intermediate Risk of the Systems/Structures Risk Importance Table for AP1000 Construction Significance Determination Process (SDP) Matrix X-Axis. Furthermore, the licensee was able to provide reasonable assurance that the structure would have been able to meet its design function. The inspectors determined the finding represented an ITAAC finding because it was material to the acceptance criteria of Vogtle Unit 3 and Unit 4 ITAAC 760, in that, if left uncorrected, the licensee could not show that the acceptance criteria of these ITAAC were met. The acceptance criteria of Vogtle Unit 3 and Unit 4 ITAAC 760 requires that all deviations between the as-built containment internal structures and the approved design be reconciled (evaluated) such that the as-built structure would withstand the design basis loads without a loss of structural integrity or other safety-related functions. The inspectors determined that the failure of these welds to meet the American Welding Society (AWS) D1.1:2000 and AWS D1.6:1999 visual weld acceptance criteria represented a nonconformance with the approved structural design, which if left uncorrected, represented a deviation from the design that would not have been reconciled by the licensee. The inspectors screened the finding for a possible construction safety focus component (CSFC) aspect in accordance with Appendix F, “Construction Cross-Cutting Areas and Aspects,” of IMC 0613, “Power Reactor Construction Inspection Reports.” This finding has a cross-cutting aspect in the area of Safety Conscious Work Environment, avoid complacency, because the licensee did not assure that individuals adequately recognized and planned for the possibility of mistakes, latent issues, and inherent risk while expecting successful outcomes, in that multiple QC inspectors failed to consider that the ends of the Complete Joint Penetration (CJP) welds were within the scope of the inspection and even though the front sides of the welds were satisfactory the ends were nonconforming. [H.12]. (Section 1A32)

## Security Programs

**Identified By: NRC**
**Identification Date:** 03/31/2019
**Significance:** Severity Level IV
**Item Type:** Enforcement
**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Integrated Inspection Reports 05200025/2019001, 05200026/2019001
**Item Number:** 05200026/2019001-02

**Note:** Closed in Report (NCV)

**Failure to Implement FFD Requirements**

The NRC identified a Severity Level IV NCV as a result of a NRC Office of Investigation (OI Report 2-2017-026) report for the licensee's failure to adequately implement the Fitness For Duty (FFD) testing program. Specifically, a FFD collector working at Vogtle Units 3 and 4 failed to ensure a donor emptied their pockets of all contents before collection of a sample. This failure allowed the donor to subvert a FFD test as required by 10 CFR 26.105(b). The licensee entered this finding into their corrective action program as CR 10366889 and subsequently re-tested all the individuals which were tested on May 8, 2017, by the FFD collector in question. All re-tested individuals passed. The FFD collector and the individual that subverted the FFD test were both removed from the site.

The finding was determined to be more than minor because the issue represented a failure of the licensee to appropriately implement the requirements of 10 CFR 26.105(b) and 10 CFR 26.85(a). Although this violation is willful, it was brought to the NRC's attention by the licensee, it involved isolated acts of low-level individuals, and it was addressed by appropriate remedial actions. The security significance of this violation was determined to be a Severity Level IV, in part, because there were no adverse security impacts to the construction facility, and the individual was precluded from entering the Construction Controlled Area. Violations that involve willfulness or that affect the regulatory process are dispositioned using traditional enforcement and are not subject to IMC 2519, "Construction Significance Determination Process." Traditional enforcement violations are not assessed for cross-cutting aspects. (2P01)

## Operational Programs

**Identified By:** NRC
**Identification Date:** 07/18/2022
**Significance:** Green
**Item Type:** Construction Finding
**Report:** Vogtle Electric Generating Plant, Unit 4 - NRC Initial Test Program and Operational Programs Integrated Inspection Report 05200026/2022006
**Item Number:** 05200026/2022006-01
**Note:** Open/Closed in Report (NCV)

**NRC Annual Operating Test Scenarios Did Not Meet Qualitative Standards**

NRC inspectors identified a construction finding of very low safety significance for the licensee's failure to identify the procedures required to be entered and expected operator actions to be performed in the simulator exam guides in accordance with NMP-TR-424-F05, "Annual Simulator Exam Development & Validation." Specifically, 9 out of 25 of the events in four sampled scenario guides used to evaluate licensed operators during the 2022 annual operating test lacked adequate crew/operator performance standards.

The performance deficiency was determined to be more than minor and a finding because it affected the training and qualification attribute of the Operational Readiness Cornerstone (Operational Programs). Specifically, the failure of the licensee to identify in simulator exam guides the required procedures to be entered and operator actions to be performed affected the quality of the 2022 annual operating test administered to all licensed operators and could have impacted the licensee's ability to evaluate the licensed operators. The performance deficiency did not impact an ITAAC, and therefore was determined to be a construction finding. The inspectors determined that the finding was associated with the Operational Readiness Cornerstone and assessed the finding in accordance with IMC 2519, "Construction Significance Determination Process," Appendix A, "AP-1000 Construction Significance Determination Process." Using the flowchart in Appendix A, since the finding was related to the licensed operator requalification (LOR) program, and the program was already required to be implemented, the finding was further assessed using the Reactor Oversight Process IMC 0609, "Significance Determination Process," (SDP) Appendix I, "Licensed Operator Requalification Significance Determination Process," Figure I.1, "Licensed Operator Requalification SDP Flowchart." The finding was related to the quality of the annual operating test but did not include greater than 40% of the reviewed simulator scenario events that were flawed; therefore, the inspectors determined that the finding was of very low safety significance (Green). The inspectors determined this finding was indicative of current licensee performance and was associated with the cross-cutting aspect of procedure adherence, in the area of human performance in accordance with IMC 0613, Appendix F, "Construction Cross-Cutting Areas and Aspects." The proximate

cause was attributed to the failure to follow processes, procedures, and work instructions.

**Identified By:** NRC
**Identification Date:** 12/31/2017
**Significance:** Green
**Item Type:** Construction Finding

The inspectors identified a construction finding of very low safety significance (Green) for the licensee's failure to include accurate parameters in the ODCM for the calculation of offsite radiation doses due to routine gaseous effluent releases. Specifically, the ODCM contained long-term atmospheric dispersion factors that were less representative of current meteorological conditions and less conservative than those used in the UFSAR and ESP to demonstrate compliance with 10 CFR 20 and 10 CFR 50, Appendix I. The licensee documented this issue in CR 10437502 and has planned corrective actions including re- evaluation of the dispersion values contained in the ODCM by an independent subject matter expert.

The finding was of more than minor significance because it was associated with the Operational Readiness Cornerstone, Program Effectiveness Attribute of Process and Effluent Monitoring, and adversely affected the associated cornerstone objective to ensure licensees adequately develop and implement the operational programs required by a license condition or regulation. The finding has a cross-cutting aspect in the area of Human Performance, Conservative Bias [H.14], because the dispersion parameters incorporated into the ODCM were less conservative than the ones used in the approved licensing basis documents (3P02). The finding is not greater than Green because the finding is not an omission of the ODCM's critical attributes.

## Violations Identified Prior to 2012

**Significance:** Severity Level IV, August 18,

2011
**Identified by:** NRC
**Item Type:** Violation
**Failure to Assure That Material Qualification Testing Associated With The Waterproof System Simulated Field Conditions.**

Based on the review of documentation and the observation of installation practices associated with site-specific (SS) ITAAC 3.8.5.1.1, the inspectors identified several examples where Southern Nuclear Operating Company, Inc (SNC) failed to simulate field conditions during qualification testing of the waterproof system. This issue was determined to be an ITAAC- related construction finding and a severity level (SL) IV violation of Criterion III, "Design Control," of Appendix B, "Quality Assurance Program Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to Title 10 of the Code of Federal Regulations (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities."

Inspection Report #: 05200025/2011009

**Significance:** Severity Level IV, December 31, 2010
**Identified by:** NRC
**Item Type:** Violation

**Failure To Assure That Purchased Services Conform To Procurement Documents**

During the review of records and the observation of a sample of pre-construction activities that could affect the quality of the safety-related containment vessel (CV), the inspectors identified several examples where Southern Nuclear Operating Company, Inc (SNC) failed to assure that safety-related services purchased through their contractor and subcontractor conformed to the CV procurement documents. This issue was determined to be a construction finding and a Severity Level IV Violation of Criterion VII, "Control of Purchased Material, Equipment, and Services," of Appendix B, "Quality Assurance Program Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to Title 10 of the Code of Federal Regulations (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities," for SNC's failure to assure that activities which could affect the quality of the safety-related

containment vessel for Vogtle Unit 3, conformed to the procurement documents.

Inspection Report #: 05200011/2010-008; 05200025/2010-002; 05200026/2010-001

**Significance:** Severity Level IV, March 6, 2009
**Identified by:** NRC
**Item Type:** Violation
**10 CFR Part 21 and 10 CFR 50.55(e) Procedure and Implementation**
The NRC inspectors issued Violations 05200025/2009-201-01 and 05200026/2009-201-01 as a result of SNC ND failure to: (1) accurately reflect the correct definitions of 10 CFR Part 21, (2) address all the requirements of 10 CFR 50.55(e), and (3) use the correct terminology throughout the procedure.

Inspection Report #: 05200025/2009-201; 05200026/2009-201-01

**Significance:** Severity Level IV, March 6, 2009
**Identified by:** NRC **Item Type:** Violation **Corrective Action Program**
The NRC inspectors issued Violations 05200025/2009-201-02 and 05200026/2009-201-02 because SNC ND NMP-GM-002 does not include guidance to screen new condition reports for potential 10 CFR Part 21 applicability and does not provide a clear link to the SNC ND 10 CFR Part 21 Procedure (ND-ARL-017).

Inspection Report #: 05200025/2009-201; 05200026/2009-201-01